

Christine M. Lee

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Education

- 2010-Ph.D. Civil and Environmental Engineering
University of California, Los Angeles (Los Angeles, CA)
Supervisors: JA Jay (Chair), MK Stenstrom, K Stolzenbach, RF Ambrose, WJ Kaiser. *Thesis: Development of rapid, viability-based methods for enumerating fecal indicator bacteria and tracking fecal pollution in urban watersheds*
- 2006-M.S. Civil and Environmental Engineering
University of California, Los Angeles (Los Angeles, CA)
Supervisor: JA Jay. *Thesis: Persistence of fecal indicator bacteria in Santa Monica Bay beach sediments*
- 2005-B.S. Chemical Engineering, biomedical option; Minor: English
University of California, Los Angeles (Los Angeles, CA)

Publications

1. **Lee CM**, Griffith JF, Jay JA. Rapid morning measurements of enterococci are a significant predictor in an empirical model for projecting midday water quality. *Submitted*.
2. Mika KB, Thulsiraj V, Ginsburg DW, **Lee CM**, Jay JA. Fecal source identification in an urbanized Los Angeles watershed shows multiple low level sources of human markers not correlated with traditional indicators. *Submitted*.
3. **Lee CM**, Griffith JF, Kaiser WJ, Jay JA. Covalently-linked immunomagnetic separation/adenosine triphosphate (Cov-IMS/ATP) technique is a rapid and field-portable method for measuring *E. coli* and *Enterococcus* spp. in fresh and marine water environments, *J. of Applied Microbiology*, 109(1) 324-333, 2010.
4. Boehm A, Griffith JF, McGee C, Edge T, Solo-Gabriele H, Whitman R, Tsao Y, Getrich M, Jay JA, Ferguson D, **Lee CM**, Madison M. Fecal indicator bacteria enumeration in beach sand: A comparison study of FIB extraction methods in medium to coarse sands, *J. of Applied Microbiology*, 107(5)1740-1750, 2009.
5. Mika K, Imamura G, Chang C, Conway V, Fernandez G, Griffith J, Kampalath R, **Lee CM**, Lin C, Moreno R, Thompson S, Whitman R, Jay JA. Pilot- and bench-scale testing of fecal indicator bacteria survival in marine beach sand near point sources, *J. of Applied Microbiology*, 107(1)72-84, 2008.
6. Ramanathan N, **Lee CM**, Lin T, Neumann R, Rothenberg S, Harvey C, Harmon T, Kohler E, Estrin D, Jay JA. Sensor-based investigation of biogeochemical control on arsenic mobilization in rural Bangladesh, Conf. Proceedings, American Chemical Society, 2007.
7. **Lee CM**, Lin TY, Lin CC, Kohbodi G, Bhatt A, Lee R, Jay JA. Persistence of fecal indicator bacteria in Santa Monica Bay beach sediments, *Water Research*, 40 (14) 2593-2602, 2006
8. Ros J, **Lee CM**, Bruce M, Fan CC, Quan R, Pai H. A Portable and Sustainable Computer Education Project for Developing Countries, *Intl J. for Service Learning in Engineering*, 1(1)27-47, 2005

Research

- 11/10-Current Postdoc, Planetary Sciences, Jet Propulsion Laboratory/Caltech
- Assessing microbial diversity of glacier samples from Mt. Kilimanjaro
 - Assessing *Bacillus* spores and *D. radiodurans* under Europa-n conditions
 - Validating germinable spore assay for measuring fecal pollution
- 2006-10 Graduate Student Researcher, Civil & Environmental Engineering, UCLA
- Developed rapid immunoassay for in-field detection of fecal indicators
 - Applied qPCR with propidium monoazide to assess viable *Bacteroidales*

- 2004-06 • Conducted field work in South CA, Baja CA, Bangladesh, and Tanzania
- Undergraduate Researcher, Civil & Environmental Engineering, UCLA
- Conducted beach research assessing fecal indicators in sediment

Teaching Experience

- 2009 Teaching Assistant- Course, Environmental Microbiology (C&EE, UCLA)
- 2009 Technical Writing Group Instructor-Graduate Writing Center, UCLA
- 2008 Reader-Course, Science Fiction (English Department, UCLA)

Leadership/Mentorship

- 2008-10 Co-coordinator-Leaders in Sustainability Graduate Program, IoE, UCLA
- 2009 Sustainability Director-Engineering Graduate Student Association, UCLA
- 2004-10 Various (VP, Project Leader, Web Mgr)-Engineers without Borders-UCLA
 - Highlights: Traveled for computer education project in Guatemala; planned and executed computer lab projects in Los Angeles (various locations)
- 2009 Mentor-CENS and CEED programs (ugrad, high school), UCLA
- 2001-04 Various (President, Tutor)-IMPACT Tutorials (middle school), UCLA

Employment

- 2003-05 Assistant Manager-SEAS *Café*, UCLA
- 2003-04 Technology Consultant-Bruin OnLine, UCLA
- 2004 Asst Energetics Engineer-Special Devices Incorporated (Moorpark, CA)
- 2003-04 Energy Efficiency Consultant-Independent (Santa Monica, CA)

Awards

- 2010-2011 Outstanding Ph.D. Student (UCLA Civil & Environmental Engineering)
- 2010 California Water Policy 2010 Conference Scholarship
- 2010 SoCal Chinese-Am Env Protection Assoc Student Research Award (1st)
- 2009-2010 Asian American Architects & Engineers Assoc Foundation Scholarship
- 2009-2010 UCLA O'Kern Dissertation Year Fellowship
- 2009 Best Student Poster, SoCal Soc of Environ. Tox & Chem., Annual Mtg
- 2008-2009 UCLA Faculty Women's Club Scholarship
- 2008-2009 Switzer Foundation Fellowship
- 2008 Gordon Conference Travel Award
- 2006 Outstanding Master's Student (UCLA HS School of Engr/Applied Science)
- 2006 Outstanding Master's Student (UCLA Civil & Environmental Engineering)

Grants

- 2010 CA Sea Grant Program Development Grant, student co-author (PI Jay)
- 2009-2010 EPA People, Planet, Prosperity, Student Design Competition Grant
- 2008-2009 BP Alternative Energy and Environmental Education Grant
- 2008-2009 AIChE Environmental Education Outreach Grant